After a year's experience with the drug Dr. F. says "it certainly does prevent the occurrence of headache, after each dose of quinine, in those who before had to desist from taking quinine for that reason. It is, perhaps, not invariably successful, but its power is very marked. It also prevents the fulness felt in the head by some persons, especially those labouring under cerebral anæmia, after doses of iron. It is also useful in nervous conditions, and, with quinine, is excellent in those cases where there is much nervous exhaustion from excessive indulgence in tea or in alcohol; this being tried in a case of nervous excitability and sleeplessness, where there had been much resort to chloral-hydrate.

In forms of excited action of the heart, connected with general nervous excitability or nervous exhaustion, hydrobromic acid is most useful. Given with quinine (of which it is a capital solvent) and digitalis, it gives better results than the bromide of potassium and digitalis; this is a favourite combination with me at both my hospitals, and is agreeable as well as effective. In all hysterical conditions connected with ovarian excitement, it seems to have all the properties of the bromide of potassium. It is equally useful in the vomiting of pregnancy, and seems to exercise quite as powerful an influence over acts of reflex origin as does the bromide. It is especially adapted for the relief of menorrhagia associated with sexual excitement, and is even more effective here than the bromides themselves. It is also of use in whooping-cough, and combines conveniently with quinine, forming an effective measure in this troublesome affection. With spirit of chloroform and syrup of squills, it forms a most agreeable and palatable cough mixture of no mean potency. It is also of use in case of cough of reflex origin. Where there is gastric irritability, it is the most useful of all acids, possessing the usual properties of acids generally and of the bromine as well.

The dose of the acid, prepared as above, is one drachm as a full dose. Half a drachm is the dose I ordinarily employ. Bromohydric acid has the further advantage of not producing the troublesome eruption so often the result of doses of the bromide of potassium, at least so far as my experience has yet extended. There are many qualities about this acid to render it a useful member in our therapeutical *armamentarium*.—*Brit. Med. Journ.*, July 8, 1876.

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7. *Antagonism between Morphia and Atropia.*—Dr. Corona describes some experiments which he has made on dogs, rabbits, and frogs, with regard to the antagonistic action of morphia and atropia. The following are the conclusions at which he has arrived:—

a. Atropia quickens respiration in an extraordinary manner; morphia, on the other hand, retards it greatly, and modifies it, the inspirations becoming large and deep, and the expirations slower.

b. Morphia produces sleep and deep coma; atropine, on the contrary, produces severe convulsions, but never sleep, in dogs and rabbits.

c. Morphia quickens the movements of the heart; atropia renders them slow.

d. While morphia accelerates the heart's action, the temperature (generally taken in the rectum) falls; atropia, on the other hand, diminishes the heart's action, while the temperature remains stationary or is slightly increased.

e. In the action of atropia, the dilatation of the pupils is the most marked symptom, as sleep is in the case of morphia; with morphia, on the other hand, the pupil is sometimes dilated, sometimes stationary, sometimes contracted. Dr. Corona finds, 1. that dilatation of the pupil occurs in animals principally when the dose of atropine introduced into the blood is relatively mild; 2. that, when the dose of atropine injected into the circulation is large, dilatation does not occur, because both the circular and radiating fibres of the iris are paralyzed; 3. that dilatation of the pupil is produced by the injection into the eye of a solution containing a very small fraction of a milligramme of atropia; 4. that the dilatation of the pupil constantly occurs, even when a large quantity of atropia is injected gradually, the other symptoms of poisoning being sudden, in consequence of the rapid elimination of a large portion of the poison.

f. Morphia never produces vaso-motor paralysis; atropia always does, as is clearly shown by observing the ears of rabbits poisoned with it. As regards this: 1. The congested vessels of the ear constantly return to the normal state under the influence of galvanization of the cervical sympathetic, in rabbits previously poisoned with atropia, and in which the vaso-motor paralysis is at the maximum. 2. During the galvanization of the sympathetic, the constriction of the vessels is followed by a diminution of temperature, corresponding to the increase attending the vaso-motor paralysis of the ear. 3. In rabbits, 20 centigrammes (0.3 grain) of neutral sulphate of atropia are required on an average to produce vaso-motor paralysis, and the injection must be made at one time; otherwise as much as 70 centigrammes (little more than a grain) may be used without producing this phenomenon, if it be injected in doses of 10 centigrammes at intervals of five minutes.

g. Morphia, while it constantly produces sleep, leaves reflex action intact, and sometimes exalts it; atropia depresses reflex action, and always produces paralysis of the posterior part of the body in animals.

As regards necroscopic results, the following conditions were always observed.

h. The lungs, liver, and spleen, were normal in both cases. The heart and large vessels were always full of blood; but this was coagulated in poisoning by morphia, fluid and blackish in poisoning by atropia. The meninges in both cases were always congested, while the brain-substance was constantly found to be anæmic. The medulla oblongata and the tubercula quadrigemina were never found hyperæmic, while the meninges covering them were so.

i. As regards the toxic dose, there was very great variation both in regard to the age and race of the animal. In rabbits, morphia was sometimes fatal in doses of 20 centigrammes (0.3 grain); whilst sometimes as much as 50 centigrammes (0.75 grain) was borne. Sleep and slowness of respiration were, however, constant results even of very small doses. In dogs, the toxic dose was much less. Atropia was tolerated in very large doses; in rabbits as much as one gramme (15 grains). It was, in many cases, fatal in doses of 50 centigrammes; never in less, except in young and very small animals. Large doses of atropia were tolerated on the first two days, but the animal did not survive the third. Even with small doses, the remarkable quickening of the respiration, the dilatation of the pupils, and the vaso-motor paralysis, were observed.

Experiments made on the pneumogastric nerves during the poisoning, whether by morphia or by atropia, showed that the antagonistic respiratory changes always proceeded from the centres of respiration.

k. Finally, with regard to the result of experiments on the alleged antagonism of atropia and morphia, Dr. Corona makes the following remarks: 1. Morphia was always capable, even in very small doses, of removing the symptoms produced by atropia, and of producing sleep. 2. During morphia sleep, very large doses of atropia did not in the least alter the symptoms due to morphia, nor was the sleep ever found to cease. 3. When atropia was injected in small doses at intervals of ten minutes, although the total quantity was large, its action was more rapidly extinguished by small doses of morphia, than when atropia was injected in a dose of not less than 20 centigrammes. 4. The injection of the two poisons into the veins showed that a much smaller dose was sufficient to produce rapid and grave poisoning; but even then the morphia produced its action instantaneously, and its symptoms always superseded those of atropia. 5. The injection into the veins of large doses of atropia and very small doses of morphia was always followed by sleep, and the manifestation of the symptoms due to atropia was tardy. 6. In all cases, after the disappearance of the symptoms due to morphia, those due to atropia appeared, in intensity proportionate to the largeness of the dose administered for the purpose of counteracting the symptoms due to morphia.

From these results, Dr. Corona concludes that a partial physiological antagonism may be recognized, but that the idea of a mutual therapeutic antagonism cannot be accepted.

He recommends in poisoning by atropia the injection of morphia and its salts, both into the veins and by the hypodermic method, but altogether disapproves of the idea of combating morphia poisoning with atropia, both because very large doses of the latter are incapable of removing the symptoms produced by morphia, and because, even if the latter are temporarily relieved, the still more deadly symptoms due to atropia supervene.—*Lond. Med. Rec.*, Aug. 1876, from *Giornale di Medicina Militaire*, April and May, 1876.

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

8. *Treatment of Angina Pectoris.*—According to Prof. SÉE, this affection is not a neurosis but an ischæmia combined with pain. The treatment should therefore be twofold. As the pain, which by its violence stops the breathing, can kill the patient in a few minutes, it is to it that we must first address ourselves when called during an attack; and we must not trust to ordinary means, which would probably act too slowly: we must immediately administer a hypodermic injection of one to two centigrammes (0.15 to 0.3 grain) of morphia. This injection, moreover, should be repeated one to three times a day, and continued at least twice in the twenty-four hours, for some weeks, until the attack has completely disappeared. Without this we shall see it reappear, and shall lose all the benefit of the remedy.

With respect to the ischæmia which we are about to mention. The morphia acts not only by suppressing the pain; it assists the circulation also, and thus directly addresses itself to the ischæmia, which, stopping the heart from receiving sufficient blood, it causes to lessen. Together with these morphia injections, we ought to give chloral enemata. By the mouth this remedy will not be borne in these cases, and it seems besides to be more easily absorbed by the rectum. This is the formula of M. Sée: ℞ chloral 2 to 3 grammes; mucilage, q. s.; water, 150 grammes. Make an enema. Chloroform should be completely banished from the treatment of angina pectoris, because it favors arrest of the heart. Nitrite of amyl has no action as a sedative, but it may perhaps be useful, because it dilates the vessels. Belladonna produces no effect; and as for antispasmodics, they are absurd in a case so serious and urgent. Acetate of ammonia has a certain value as an excitant of the circulation, and because it acts at the same time on the respiration; but it is not so valuable as the morphia. External measures, as cupping, heat, frictions, etc., have no value; nevertheless, we are sometimes obliged to use them in deference to prejudice. To prevent a return of the attack, we must have recourse to bromide of potassium or digitalis. During the attack the use of bromide would be absurd, because it contracts the vessels instead of dilating them; besides, its action would be too slow; but in the interval it serves, like digitalis, as a regulator of the circulation and the respiration. Arsenic, much vaunted, does no good. Hydrotherapy is highly dangerous, and its employment can only be explained on the idea that we had a neurosis to deal with. With this method of treatment, either a return of the attack or cerebral congestion is to be feared.—*Lond. Med. Record*, July 15, 1876.

9. *Sunstroke treated by Quinia; Recovery.*—A case of this is reported by Dr. DRAKE (*Canada Med. and Surg. Journ.*, Sept. 1876). The patient, a man æt. about 45, was found by the police, on the afternoon of July 13th, lying on his back insensible, in an open place near the wharves, quite unsheltered from the intense rays of the sun, and brought to the Montreal General Hospital at half-past 5 o'clock. "On admission he was insensible, skin hot and dry, face dusky, pupils contracted, conjunctiva injected, tongue dry and parched, respiration shallow, pulse feeble and thin, almost imperceptible and quite impossible to count, secretion completely arrested; temperature 107.8°.

Seeing the necessity for prompt action, I at once applied an ice-bag to the head, and, on account of the excessively high temperature, gave him 30 grains of quinine in three doses at intervals of half an hour. Two hours after the first dose was administered, the skin became moist and was soon covered with profuse